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REEL

558

SVIRIDOVICH, V.

METEL'SKIY, V.; SHAMAYEVA, L.; SVIRIDOVICH, V.

Effectiveness of green fallows in Kemerovo Province. Zemledelie  
24 no.1:22-27 Ja '62. (MIRA 15:2)

1. Kemerovskaya oblastnaya gosudarstvennaya sel'skokhozyaystvennaya  
opytnaya stantsiya.

(Kemerovo Province--Fallowing)

34697  
S/137/62/000/002/034/144  
A006/A101

123100

AUTHORS: Bogomil'skaya, Ye. P., Sviridovskaya, R. M.

TITLE: A method of extracting molybdenum from wash waters of ammonium molybdate production

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 16, abstract 2G121 ("Sb. tr. Vses. n.-i. in-t tverdykh splavov", 1960, no. 3, 16-22)

TEXT: As a result of investigations performed, it was established that the cationic method can be used for Mo extraction from acid solutions, where Mo is contained in the form of  $\text{MoO}_2^{2+}$ . Sulfurized carbon is a most suitable cationite. For instance, if spent acid and acid wash water, obtained from processing molybdenum concentrate with weak HCl, are passed through sulfurized carbon in  $\text{NH}_4^+$  form, then Mo can be extracted from them. The highest exchanging capacity of sulfurized carbon in respect to Mo is obtained when filtrating wash waters whose pH is equal to 0.5. Mo absorbed by the sulfurized carbon can be practically completely extracted by ammonia solutions (2.5%). Mo regeneration from wash waters according to the method suggested makes it possible to raise Mo extraction under industrial conditions by 2-3%. ✓

[Abstracter's note: Complete translation]

G. Svodtseva

Card 1/1

YURKEVICH, Yu.N.; SHAPIRO, K.Ya.; SVIRIDOVSKAYA, R.M.

Acid processing of wolframite concentrates. Zhur. prikl.  
khim. 37 no.10:2112-2120 O '64.

(MIRA 17:11)

SOBOLEV, N.N.; BELOUSOV, M.M.; RODIN, G.M.; SVIRIDOV, A.G.; SKOROBOGATOV,  
N.G.; FAYZULLOV, F.S.

Temperature of the flame of a liquid-propellant rocket engine. Part 1.  
Zhur.tekh.fiz. 29 no.1:27-36 Ja '59. (MIRA 12:4)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR, Moskva.  
(Rockets (Aeronautics)) (Flame) (Temperature—Measurement)

SVIRIN, I.

Metal-rolling. Tekh.mol. 28 no.6:18 '60. (MIRA 13:7)  
(Rolling (Metalwork))

SVIRIN, I.

The most powerful in the world. NTO 3 no. 1:15-16 Ja '61.  
(MIRA 14:2)

(Stalingrad Hydroelectric Power Station)



*SVIRIN, I.*  
SVIRIN, I.

"Clay silicate." Tekh. mol. 25 no.11:34-35 N '57.  
(Building materials)

(MLRA 10:11)

IL'IN, S., zhurnalist; RUSAKOVA, V., zhurnalist; BRODOVSKIY, B., zhurnalist;  
SVIRIN, I., zhurnalist; KISHCHIK, P., zhurnalist; STOYKEVICH, M.,  
zhurnalist; PAREMSKIY, V., zhurnalist; L'VOV, B., zhurnalist;  
LYUBASHCHENKO, I., zhurnalist; VYSOTSKIY, Ye., zhurnalist;  
KHOVOSTOVA, D.M., red.; SHADRINA, N.D., tekhn.red.

[Innovators in the seven-year plan; people with work achievements]  
Zachinateli novogo v semiletke; liudi trudovogo podviga. Moskva,  
Izd-vo VTsSPS Profizdat. No.7. 1961. 66 p.

(MIRA 15:2)

(Building--Technological innovations)

SVIRIN, I.; STOYKEVICH, M.

The fourth power station on the Dnieper. NT0 5 nd.2:21-23 F '63.  
(MIRA 16:3)

(Dneprodzerzhinsk hydroelectric power station)

SVIRTN, J.

The summer was hot. Grashd. av. 21 no. 21:08 N '64.

(MIRA 18:3)

SVIRIN, Ivan Petrovich; IVANOV, Yuriy Nikolayevich; KARLOV, A.Ya.,  
red.; SHLEPINA, M.M., red.; GOLICHENKOVA, A.A., tekhn.red.

[How they build in Magnitogorsk] Tak stroiat v Magnitogorske.  
Izd-vo VTsSPS, 1958. 44 p. (MIRA 12:6)  
(Magnitogorsk--Building)

SVIRIN, N.

Skopin Municipal Fire Department. Pozh.delo 5 no.8:15-16  
Ag '59. (MIRA 12:12)

1. Starshiy rayonnyy pozharney inspektor, g.Skopin.  
(Skopin--Fire departments)

SVIRIN, H.F., Cand Tech Sci <sup>(diss)</sup> <sup>reticular</sup> "New ~~lattice~~ wood constructions."  
Len, 1959. 21 pp with drawings (Min of Higher Education USSR.  
Len Order of Labor Red Banner Construction Engineering Inst.  
Chair of Constructions of Wood and <sup>Plastics</sup> ~~Plastics~~), 130 copies  
(YL, 27-59, 121)

- 39 -

SVIRIN, N.F., aspirant

New reticular wooden construction elements. Sbor. nauch. trud.  
LISI no.3:105-116 '59. (MIRA 13:7)  
(Domes) (Towers)



GERASIMOV, Igor' Dmitriyevich; ~~SVIRIN, N.F., red.~~; ALABYSHEVA,  
N.A., red.izd-va; GVIRTS, V.L., tekhn. red.

[Building of thin-walled three-dimensional structures in  
Krasnoyarsk Territory] Stroitel'stvo tolkostennykh pro-  
stranstvennykh konstruksii v Krasnoyarskom krae. Lenin-  
grad, 1963. 20 p. (Leningradskii dom nauchno-tekhnicheskoi  
propagandy. Obmen peredovym opytom. Seriya: Stroitel'noe  
proizvodstvo, no.1) (MIRA 17:3)

SVIRIN, P.M.; KARPMAN, M.I.

Production of vegetable tanning extracts. Kozh.-obuv. prom. no.8:22-24  
Ag '59. (MIRA 13:1)

(Tanning materials)

VOIKOV, N.V.; KARPMAN, M.I.; SVIRIN, P.M.

Effect of storage conditions on the quality of willow bark.  
Kozh.-obuv. prom. 2 no. 11:30-31 N '60. (MIRA 13:12)  
(Tanning materials)

ACC NR: AP6016748

SOURCE CODE: UR/0375/66/000/001/0036/0042

(N)  
AUTHOR: Svirin, S. K. (Captain 2d Rank; Candidate of Naval Sciences)

ORG: None

TITLE: Statistical research methods

SOURCE: Morskoy sbornik, no. 1, 1966, 36-42

TOPIC TAGS: operations research, research program, statistic analysis, statistics, torpedo, submarine, naval tactic, naval training, naval weapon

ABSTRACT: Statistical research connected with evaluating the effectiveness of a tactical method involves discovering the basic factors on which such effectiveness depends, selecting the index which characterizes that effectiveness (the index of effectiveness), organizing the collection of the statistical data, putting the assembled data in a form convenient for analysis, computing the statistical characteristics, and analyzing the material obtained. The various stages involved in such research are reviewed by using the concrete example of evaluating the effectiveness of various methods of determining the elements of target movement in order for a submarine to launch a torpedo attack. When the technical processing of the results of observations are concluded, the next step is the investigation of the nature of the change in the quantities studied, followed by conclusions, and the drafting of

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ACC NR: AP6016748

recommendations for use of forces, weapons, or equipment. If the material collected permits no conclusions of interest to the researcher, the trend future research is to take is determined, and the statistical materials are collected. Orig. art. has: 1 figure, 2 tables and 10 formulas.

SUB CODE: 12,15/SUBM DATE: None/ORIG REF: 003

Card 2/2

KOSTIN, S.M., inzh.- kapitan 2-go ranga; SVIRIN, S.K., kand. voyenno-morskikh nauk, kapitan 2-go ranga

Statistical study of the efficiency of tactical maneuvers. Mor.  
sbor. 48 no.12:15-20 D '64. (MIRA 18:2)

ZHG. TOV, O., zasluzhennyy master sporta; GUEAREV, V., master sporta;  
ILYUSHIN, V., master sporta; KUDRYASHOV, Yu., master sporta;  
RABINOVICH, I., master sporta; KHAYDUROV, Ye., master sporta;  
SHPAGIN, M., master sporta; SURANOV, P.; SVIRIN, V., strelok  
1-go razryada; GNEUSHEV.

What should a marksmanship club be like? Voen. znan. 33 no. 4:  
26 Ap '57. (MLRA 1C:6)

(Rifle practice)

MITYUSHKIN, I.; AVRINSKIY, P.; LUTSAN, Ye.; STRUCHKOV, A.; KOREN ' , L.;  
SVIRIN, V., instruktor peredovykh metodov truda; YAREMCHUK, N.

We are informed... Stroitel' 8 no.5:6 My '62.  
(Building—Technological innovations)

(MIRA 15:7)



1ST AND 2ND EDITIONS										100 AND 4TH EDITION									
PROCESSES AND PROPERTIES INDEX																			
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ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
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SVIRIN, V.G.

~~TSvet.net.27~~  
Dust control measures for crushing sections. TSvet.net.27  
no.3:4-7 My-Je '54. (MIRA 10:10)  
(Ore dressing) (Dust--Removal)

*Svirin, V. G.*

137-1957-12-23004

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 21 (USSR)

AUTHOR: Svirin, V. G.

TITLE: The Management of Ball and Rod Supplies for Mills at Concentration Plants (Organizatsiya sharovogo i sterzhnevogo khozyaystva na obogatitel'nykh fabrikakh)

PERIODICAL: Obogashcheniye rud, 1956, Nr 5, pp 23-39

ABSTRACT: A description of the management of the ball and rod supplies in the concentration plants of Balkhash, Sredne-Ural'sk, Dzhezkazgan, Leninogorsk, and Apatity, as well as in a number of concentration plants in the USA. The author draws the conclusion that it is expedient to store the crushing equipment in the aisles of the crushing sections of the main buildings or in special annexes. Wherever possible a railroad siding should lead into the building or the annex. Electromagnetic cranes represent the most effective way of mechanizing the operations. The charging of balls into the mill can be best accomplished by the method used at the Balkhash plant. If reserve mills are available, the re-sizing of the balls should be performed on a stationary unit with a drum type sifter.

Card 1/2

137-1957-12-23004

The Managem't of Ball and Rod Supplies in Concentrat'n Plants

In the absence of reserve mills, the method used by the Apatit plant may be employed. For the loading of rods large plants may introduce the pneumatic machine developed by the mechanical repair section of the Mekhanobr. The weighing of the rods and balls is mandatory; most efficient for this purpose are the overhead crane scales.

A. Sh.

1. Metallurgy-USSR
2. Materials-Control
3. Production-Planning

Card 2/2

SOV/137-57-11-20756

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 17 (USSR)

AUTHOR: Svirin, V. G.

TITLE: ~~The Prime Causes~~ of the Long Start-up Periods at New Dressing Mills (Osnovnyye prichiny dlitel'nogo osvoyeniya novykh obogatitel'nykh fabrik)

PERIODICAL: Obogashcheniye rud, 1956, Nr 6, pp 6-12

ABSTRACT: The experiences of three major dressing mills - the Dzhezkazgan, Olenegorsk, and KYUGOK - are employed to illustrate the fact that the attainment of planned capacities and production indices drags out over a long start-up period for the following primary reasons: Failures to complete structural or other components, poor assembly and unsatisfactory quality of equipment supplied, failure to ready the maintenance shop, clumsy operation of the plant, and erroneous designs. The courses to be followed to eliminate these shortcomings are indicated.

Card 1/1

A. Sh.

SVIRIN, V.G.

Ways of automatizing crushing operations in ore-dressing plants.  
Gor. zhur. no.2:57-60 F '58. (MIRA 11:3)

1. Mekhanobr.

(Ore dressing)

SVIRIN, V.G.; YUDELEV, D.M.

Repair and maintenance in Krivoy Rog ore-dressing combines. Obog.  
rud 3 no.6:33-45 '58. (MIRA 14:8)  
(Krivoy Rog Basin--Ore dressing--Equipment and supplies)



SVIRIN, V.G.

Mechanization of the assembly and repair of belt conveyers.  
Obog. rud 4 no.5:26-29 59. (MIRA 14:8)  
(Conveying machinery--Maintenance and repair)

SVIRIN, V.G.

Ways of saving on steel for lining crushers and mills.  
Obzg. rud 5 no.1:34-36 '60. (MIRA 14:8)  
(Crushing machinery) (Mechanical wear)

SASON, N.S.; SVIRIN, V.G.

Objectives in the mechanization of ore dressing plants. Obog.rud  
5 no.2:42-51 '60. (MIRA 14:8)  
(Ore dressing—Equipment and supplies)

SVIRIN, V.G.

Improving the efficiency of equipment in ore-dressing plants.  
TSvet.met. 33 no.1:7-12 Ja '60. (MIRA 13:5)  
(Ore dressing--Equipment and supplies)

SVIRIN, V.G.

Making up the full load of balls in ball mills. TSvet. met 33  
no. 12:6-8 D '60. (MIRA 13:12)

(Crushing machinery)

SVIRIN, V.G.

Setting-up of ore dressing equipment in open and semiopen  
areas. TSvet. met. 34 no.8:19-22 Ag '61. (MIRA 14:9)  
(Ore dressing--Equipment and supplies)

SVIRIN, V. G.

New type of ore dressing plant. TSvet. met. 35 no.10:17-23  
0 '62. (MIRA 15:10)

(Ore dressing)

SVIRIN, V.G.

Set-replacement method for mill maintenance in ore dressing  
plants. TSvet.met. 35 no.12:56-58 D '62. (MIRA 16:2)  
(Crushing machinery--Maintenance and repair)



SVIRIN, V.G.

A further improvement in the design of KMD-2200 UZTM crushing machines should be made without delay. TSvet. met. 36 no.8:  
17-19 Ag '63. (MIRA 16:9)  
(Crushing machinery--Design and construction)

SVIRIN, V.Z.

Remodeling welding machines. Suggested by V.Z.Svirin. Rats.i  
izobr.predl.v stroi. no.8:126-128 '58. (MIRA 13:3)

1. Rukovoditel' brigad instruktorov peredovykh metodov truda  
Orgatroya Nauchno-issledovatel'skogo instituta organizatsii,  
mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.  
(Electric welding--Equipment and supplies)

SVIRIN, V.Z.

Using MTM spot welding machines in manufacturing wide reinforcing  
screens. Stroi. prom. 36 no.2:12-14 F '58. (MIRA 11:2)  
(Reinforced concrete) (Electric welding)

OVCHINNIKOV, S.I., kand. tekhn. nauk; SVIRINA, V.I., inzh.

Designing conveying lines for a wide-assortment production.

Leg.prom. 18 no.10:6-9 0 '58.

(MIRA 11:11)

(Assembly-line methods)

KARZHEV, V.I.; SIL'CHENKO, Ye.I.; GONCHAROVA, N.V.; SVIRINA, V.P.;  
GOYKHMAN, G.L.

Activity of phosphoric acid catalyst pellets. Khim.i tekhn., topl.i  
masel 8 no.8:19-23 Ag '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke  
nefti i gazov i polucheniya iskusstvennogo zhidkogo topliva.  
(Petroleum—Refining) (Catalysis) (Phosphoric acid)

ACCESSION NR: AP4039763

S/0065/64/000/006/0024/0028

AUTHOR: Karzhev, V. I.; Sil'chenko, Ye. I.; Concharova, N. V.;  
Svirina, V. P.; Lebedeva, A. M.

TITLE: Separation of aromatic hydrocarbons by means of complexes

SOURCE: Khimiya i tekhnologiya topliv i masel, <sup>9</sup>no. 6, 1964, 24-28

TOPIC TAGS: xylene, p-xylene, m-xylene, antimony(III) chloride,  
p-xylene separation

ABSTRACT: A study has been made of the separation of p-xylene by means of complex formation with  $SbCl_3$  from a mixture of  $C_8$  aromatic hydrocarbons produced in the aromatization of gasoline fractions. The principal purpose was to determine the maximum percentage recovery of p-xylene obtainable. The purity of the isolated p-xylene was also studied. Xylenes, synthetic mixtures of pure p- and m-xylene, and the 136—140C xylene fraction produced at the Novokuybyshevskiy Refinery were used.  $SbCl_3$  was dissolved in the

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ACCESSION NR: AP4039763

hydrocarbon mixture at 60—70C. The solution was cooled to a pre-determined temperature, and a  $\text{SbCl}_3 \cdot \text{C}_6\text{H}_4(\text{CH}_3)_2$  crystal seed (mp, 56C) was added. After standing for one hour, the precipitated crystalline complex was filtered off and thermally decomposed at 136—144C.. The hydrocarbons were isolated by distillation. Optimum conditions for various stated initial compositions are given in tables. It was concluded that separation of highly concentrated p-xylene is best conducted in a continuous equipment in two or three stages, depending on the starting-material composition, the complex being decomposed between the stages. In this case, 94—96% p-xylene is produced after the last stage. The  $\text{SbCl}_3$  can be repeatedly regenerated. The mother liquor can be returned to the first stage and m-xylene can be separated from it by complex formation with  $\text{SbCl}_3$  under different conditions. This research was done at the All-Union Scientific Research Institute of the Petroleum Industry. Orig. art. has: 5 tables and 1 figure.

Card 2/3

ACCESSION NR: AP4039763

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 24Jun64

ENCL: 00

SUB CODE: GC

NO REF SOV: 003

OTHER: 003

Card 3/3



SHABAROV, Yu.S.; POTAPOV, V.K.; KOLOSKOVA, N.M.; PODTEREBKOVA, A.A.;  
SVIRINA, V.S.; LEVINA, R.Ya.

~~1. Moscow State University~~

Cyclopropanes and cyclobutanes. Part 38: Nitration of 2-substituted  
phenylcyclopropanes. Zhur. ob. khim. 34 no.9:2829-2832 S '64.  
(MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet.

ZAVETA, K.; SVIRINA, Ye.; MALIKOVA, O.

Effect of thermal treatment on the electric properties of  
manganese ferrate single crystals. Fiz.tver.tela 4 no.12:  
3593-3595 D '62. (MIRA 15:12)

1. Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova.  
(Manganese ferrate crystals—Electric properties)  
(Metals, Effect of temperature on)

SVIRINA, Ye. P.

"Magnetization of Permalloy in a Longitudinal Constant Magnetic Field," Zhur.  
Tekh. Fiz., 16, No.12, 1946

Sci.Res. Inst. Physics, Odessa State U. im. Mechnikov

SVIRINA, Ye. P.

CAND PHYSICOMATH SCI

Dissertation: "Investigation of the Kinetics of Changes in the Magnetic Properties  
of Permalloy in the Process of Superstructural Transformations."

25 May 49

Moscow Order of Lenin State V imeni M.V. Lomonosov.

SO Vecheryaya Moskva  
Sum 71

YE. S. SVIRINA

USSR/Physics - Crystals

11 Feb 50

"Activation Energy in Superstructure Transformations," N. S. Akulov, Active  
Mem, Acad Sci Belorussian SSR, Ye. P. Svirina

"Dok Ak Nauk SSSR LXX, No 5, pp 789-791

Attempts to use magnetic methods to study kinetics of superstructure transformations  
and activation energy. Annealed molybdenum permalloy toroid specimen 1 hr. at 1,000°  
C. Established partial order of crystal lattice atoms by tempering in air.  
Studied kinetics of superstructure transformations at 400, 440, 470, and 490°C.  
Determined magnetic saturation according to magnetization curve. Found activation  
energy for molybdenum permalloy in transition from disorder to order was  
37 kg-cal/mole. Lower activation energy for molybdenum permalloy is probably  
due to influence of Mo (affrox 3%). Submitted 17 Dec 49

PA 165T58

*Evaluation B-78945, 15 Sep 54*

~~66467/79 7d~~

~~VI-2-1000-1000~~

184T99

SVIRINA, Ye. P.

USSR/Physics - Magnetism

"Kinetics of the Variation of Energetic Anisotropy  
During Superstructural Conversion," N. S. Akulov,  
Act Mem, Acad Sci Belorussian SSR, Ye. P. Svirina

"Dok Ak Nauk SSSR" Vol LXXVI, No 5, pp 669-671- 1951

Gives curves showing dependence of const K of energetic anisotropy upon time of soaking of isothermal process for various temps and establishes law connecting quantity K with deg of order sigma in the ordering process. Method of detg K is described by Akulov in "Zs fur Physik" 69, 822, 1931. Submitted 12 Dec 50.

184T99

SVIRINA, Ye. P.

Permalloys

Kinetics of the change in magnetic properties of highly permeable alloys of the permalloy type during superstructural transformations. Izv. AN SSSR. Ser. fiz. 16, No. 6, 1952.

Discussion of theories recently developed by N.A. Akulov (DAN SSSR, 66, 3 1949), S.V. Vonsovskiy (ibid 26, 564, 1940), A. N. Kámar (ibid 11, 491, 1947) and others which permit studies of kinetics of superstructural transitions by magnetic methods. Results of authoress' expts proved that presence of ordered and disordered phases determine behavior of coercive force.

251T32

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SVIRINA, YE. P.

# USSR.

Effect of the degree of ordering on the magnetic properties of highly permeable alloys. E. P. Svirina. *Uchenye Zapiski Mosk. Gosudarst. Univ. Ser. A: Fiziko-Matematicheskie Nauki*, No. 6, 111-20 (1962).—The relation of the magnetic properties of Mo-permalloy (77.5% Ni, 11.5% Fe, ~ 3% Mo) to the degree of ordering,  $\sigma$ , was detd. The magnetic satn., permeability, and coercive force were measured at room temp. The data show that as the disordered-ordered transition occurs the Mo permalloy becomes more magnetically hard.

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SVIRINAYE P.

*4 18 18*  
 ✓ The Nernst-Thomson-Magnetic Effect in Iron-Nickel Alloys.  
 E. P. Svirina and R. P. Ivanova (Fizika Metallov i Metallo-  
 fizika, 1958, 3, (3), 444-449). (In Russian). The Nernst  
 e.m.f. ( $\mathcal{E}$ ) was measured as a function of compn. and applied  
 field for 7 alloys of the Fe-Ni system contg., resp., 28, 30, 36,  
 45, 61, 73, and 85 at. % Ni.  $\mathcal{E}$  for given dimensions and  
 temp. gradient had a sharp max. at compn. = a little < 60  
 at. % Ni falling approx. to zero at ~30% Ni and to ~1/2 of  
 max. value at 75% Ni.  $\mathcal{E}$  of applied field ( $H$ ) up to a value of  
 which depended on compn., then turned sharply over to  
 steady saturation value. For specimens of a compn. close  
 to FeNi, the Nernst parameter rose linearly with intensity  
 of magnetization ( $I$ ) up to ~1000 gauss. The slope of  
 these curves depended on the thermal history of the specimen,  
 i.e. on degree of ordering. The various results are set out in  
 graphs and tables. —A. F. B.

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Moscow State U

SVIRINA, E. P.

• Nuclei thermomagnetically stable ...  
E. P. SVIRINA, P. A. KOSLOV, V. M. KOSLOV  
Acad. Sci. USSR, Moscow, U.S.S.R.  
A solution is proposed for the problem of the  
of metal with a magnetic field at right angles to the  
rent. An equilibrium is attained between the forces  
between the 2 long edges of the plate strip. The  
distribution of the forces is determined by the  
and is a function of the magnetic field strength.

147  
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11

SOV/126-6-4-7/34

AUTHORS: Belov, K.P.,  
Svirina, Ye.P.,  
Belous, Yu.V.

TITLE: Hall Effect in Alloys in the Region of Ferromagnetic  
Transformation (Effekt Kholla v splavakh v oblasti  
ferromagnitnogo prevrashcheniya)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol6,  
Nr 4, pp 621-627 (USSR)

ABSTRACT: The temperature characteristic of the Hall constant  
has a complicated shape, particularly in the neighbour-  
hood of the Curie point. Usually, the Hall constant at  
any temperature is determined from the inclination  
angle of the Hall emf - magnetisation curves. However,  
the characteristic of these curves changes considerably  
with the temperature. On approaching the Curie point  
the role of the processes of displacement and rotation  
decreases, whilst the role of the real magnetisation  
(the para-process) becomes paramount. Thus, from the  
Hall emf - magnetisation curves some "mixed" Hall  
constant is determined which is caused by the

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SOV/126-6-4-7/34

# Hall Effect in Alloys in the Region of Ferromagnetic Transformation

orientations of the spontaneous magnetisation, which are due to the magnetic forces of the lattice and they are also due to changes in this magnitude caused by the exchange forces. The necessity of determining two separate Hall constants corresponding to the processes of orientation of the magnetic moments of the domains and of the para-process has been pointed out for the first time by Volkov (Ref.7). The authors of this paper have attempted to dispense with the usually applied method of calculation of the Hall constant in ferromagnetics from measured data. Since the fundamental characteristic of a ferromagnetic is its spontaneous magnetisation  $I_s$ , an attempt has been made to separate from the experimental data the "spontaneous" Hall effect and to study the variation of this effect with the temperature. This method of studying the temperature dependence of the Hall effect excludes the influence of magnetisation processes brought about by an external field. Investigation of the temperature

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SOV/126-6-4-7/34

Hall Effect in Alloys in the Region of Ferromagnetic Transformation

dependence of the "spontaneous" Hall effect is also of interest from the point of view of verifying conclusions based on quantum mechanics theories of the Hall effect in ferromagnetics (Ref.8) in which this effect is considered as being a function of the spontaneous magnetisation. The authors of this paper investigated alloys with a high paraprocess (invar steels), since in such steels it is easier to separate out the "spontaneous" Hall effect than in other ferromagnetics. Furthermore, all the measurements were carried out in the region of ferromagnetic transformation (near the Curie point) where the processes of technical magnetisation are small, which also makes the determination of the spontaneous Hall effect easier. The investigations were carried out on specimens of the following compositions:

56.0% Co; 10.0% Cr; rest Fe.

36.0% Ni; 6.0% Co; rest Fe.

31.5% Ni; 5.7% Cr; rest Fe.

Card 3/5

SOV/126-6-4-7/34

# Hall Effect in Alloys in the Region of Ferromagnetic Transformation

After manufacture, the 6 x 12 x 150 mm specimens were subjected to homogenisation annealing in vacuum at 1000°C for 15 hours with subsequent slow cooling. The magnetisation was determined by a ballistic method. The Hall emf was measured in accordance with a method described by Kakoin (Ref.3) and Pugh (Ref.9) using a photo-electro-optic amplifier as described by Kozyrev (Ref.10). For each specimen the magnetisation and the Hall emf as a function of the field at a given temperature were measured simultaneously. The temperature was varied by means of a furnace with a bifilar heating wire placed inside the solenoid which generated the uniform magnetic field along the specimen. During the measurements the temperature was maintained constant with an accuracy of  $\pm 0.1^\circ\text{C}$ . The obtained results are graphed in Fig.1-8. It was found that in the neighbourhood of the Curie point the Hall constant

Card 4/5

SOV/126-6-4-7/3<sup>4</sup>

Hall Effect in Alloys in the Region of Ferromagnetic  
Transformation

shows a linear dependence on the square value of the  
spontaneous magnetisation. There are 8 figures and  
11 references of which 6 are Soviet and 5 English.

ASSOCIATION: Moskovskiy Gosudarstvennyy Universitet  
Imeni M.V.Lomonosova (Moscow State University imeni  
M.V.Lomonosov)

SUBMITTED: 1st April 1957.

Card 5/5

24.7600 1043, 1138, 1395

20330  
S/188/60/000/006/003/011  
B101/B204

AUTHORS: Svirina, Ye. P., Sirota, Z. D.

TITLE: Hall effect in  $\text{Fe}_3\text{Pt}$  alloy near Curie temperature

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 3, fizika, astronomiya, no. 6, 1960, 27-30

TEXT: It is the purpose of this paper to study the change in the Hall emf of an alloy, whose composition is a near approach to that of the  $\text{Fe}_3\text{Pt}$  (58% Pt, 42% Fe), near Curie temperature in dependence on temperature and thermal treatment. The Hall emf and the intensity of magnetization were measured according to a method described in Ref. 5. The specimen investigated was chilled either with  $1000^\circ\text{C}$  in water, or annealed for 6 hours at  $600^\circ\text{C}$ . Figs. 1 and 2 show the isothermal lines of the Hall emf for the chilled and for the annealed specimen. From the curves of the intensity of magnetization and of the Hall emf which take an analogous course, the spontaneous Hall emf  $E_s$  and the intensity  $\sigma_s$  of magnetization were thermodynamically calculated. Figs. 3 and 4 show these

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Hall effect in  $\text{Fe}_3\text{Pt}$ ...

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S/188/60/000/006/003/011  
B101/B204

values as function of temperature. Herefrom a Curie temperature of  $87.5^\circ\text{C}$  is obtained for the chilled specimen, while  $186^\circ\text{C}$  is obtained for the annealed specimen. The increased Curie temperature and the electric resistivity, which is lower by 25%, of the annealed specimen led to the assumption that this specimen was partially ordered. The spontaneous Hall constant  $R_s = E_s/\sigma_s$  increased with temperature up to Curie point. It was found that  $R_s$  in case of both specimens is a linear function of  $\sigma_s^2$ . In Ref. 5 it was shown that the Hall emf  $E$  of ferromagnetics in magnetic fields, which are larger than the field  $H_s$  of technical saturation, may be expressed by  $E = R_o H + R_s \sigma_s + R_i \sigma_i$ .  $R_o$  is the classical Hall constant, which determines signs and number of electricity carriers;  $R_i$  is the Hall constant of the true intensity of magnetization;  $\sigma_i$  is the intensity of magnetization of the para process. By differentiating (1) one obtains:  $\partial E/\partial H = R_o + R_i \partial \sigma_i/\partial H$  (2), where  $\partial E/\partial H = \chi_E$  is the susceptibility of the Hall emf within the region of the para process.

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Hall effect in  $\text{Fe}_3\text{Pt}$ ...

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B101/B204

$\partial\sigma_1/\partial H = \chi_1$  - the susceptibility of the para process. As shown by Fig. 7, there is a linear interrelation between  $\chi_E$  and  $\chi_1$ . The straight lines cut off a section on the ordinate, which corresponds to  $R_0$ .  $R_0$  is negative and depends only little on temperature and thermal treatment. From  $R_0 = 1/nec$  ( $n$  = number of conduction electrons,  $e$  = electron charge,  $c$  = velocity of light),  $n = 6 \cdot 10^{20} \text{ cm}^{-3}$  was calculated. The authors thank Professor K. P. Belov for discussions. [Abstracter's note: This is a nearly complete rendering of the original text.] There are 7 figures and 6 references: 4 Soviet-bloc.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Kafedra obshchey fiziki dlya biologov (Moscow State University, Department of General Physics for Biologists)

SUBMITTED: April 4, 1960

Card 3/7

24,7700  
15.2450

27301

S/181/61/003/008/031/034  
B111/B102

AUTHORS: Belov, K. P., and Svirina, Ye. P.

TITLE: Hall effect in monocrystalline manganese ferrites

PERIODICAL: Fizika tverdogo tela, v. 3, no. 8, 1961, 2495 - 2497

TEXT: The changes of the number of carriers and of their mobility in monocrystalline manganese ferrites are studied as functions of temperature and composition. The crystals were grown by Verneuil's method and displayed an excess of hausmannite as compared to the stoichiometric composition. Experiments showed that the Hall constant  $R_0$  (for this classical determination of  $R_0$  in ferromagnetic substances see Ref. 3; K. P. Belov, Ye. P.

Svirina, ZhETF, 37, 1212, 1959) was negative for the ferrites examined by the authors. The carrier concentration was calculated from  $R_0 = \gamma/ne$ ,

where  $\gamma \approx 1$  is a constant characteristic of electron scattering in the semiconductor. Measurements in monocrystalline manganese ferrites revealed that the number of conduction electrons rises with rising temperature.  $\ln n$  is a linear function of  $1/T$ , and the activation energy of conduction

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27301

S/181/61/003/008/031/034  
B111/B102

Hall effect in monocrystalline...

electrons is determined from its slope. From the  $\ln n = f(1/T)$  curves it follows that monocrystalline manganese ferrites with an excess of hausmannite are typical semiconductors. Substitution of Fe ions by Mn ions leads to an increase of activation energy and to a decrease of the number of electrons, which in turn results in a decrease in resistivity. The fact that the mobility decreases with increasing temperature indicates that an electron exchange between ions of variable valencies, as assumed by E. Verwey and J. de Boer (Ref. 6: Rec. Trav. Chim. Pays. Boc., 55, 531, 1952) is not predominant in the conduction mechanism of the ferrites studied. The decrease of mobility with rising temperature shows that conduction electrons are predominantly scattered by lattice vibrations. A. A. Popov is thanked for having supplied the single crystals, and V. L. Bonch-Bruyevich, Doctor of Physical and Mathematical Sciences, for discussions. There are 2 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 5, 1961  
Card 2/2

44141

S/181/62/004/010/028/063  
B108/B104

12.1500  
AUTHORS: Belov, K. P., Svirina, Ye. P., and Malikova, O. A.  
TITLE: The electrical conductivity of manganese ferrite single crystals  
PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2829-2831

TEXT: The temperature dependence of the Hall emf, of the magnetization  $\sigma$ , and of the electrical conductivity  $1/\rho$  of manganese ferrite single crystals was studied. The crystals were slightly out of the stoichiometric composition, either by a manganese or by an iron excess. The Hall emf  $E_H = (R_0 H + R_m \sigma)j$  increases rapidly with an excess of Mn. The magnetic Hall constant  $R_m$  rises linearly with increasing  $\rho$ . The classical Hall constant  $R_0$  is negative. The electron concentration calculated from it increases with increasing temperature according to an exponential law. The electron mobility calculated from  $R_0$  and  $\rho$  decreases considerably with increasing temperature in the case of manganese ferrite with excess Mn. In ferrite

Card 1/2

The electrical conductivity of...

S/181/62/004/010/028/063  
B108/B104  
II.

with excess Fe it decreases only a little. This shows that in the former case the phonons contribute most to the scattering of electrons (A. Miller. J. Appl. Phys., 31, no. 5, 261, 1960). There are 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: May 28, 1962

Card 2/2

L 11994-55 EWT(1)/EED-2 AFWL/ASD(d)/ESD(dp)/ESD(t)

ACCESSION NR: AP4048417

S/0181/64/006/011/3378/3382

AUTHOR: Svirina, Ye. P.

TITLE: The spontaneous Hall coefficient of ferrites B

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3378-3382

TOPIC TAGS: Hall coefficient, spontaneous magnetization, manganese ferrite

ABSTRACT: An analysis is made of the spontaneous Hall coefficient  $R_s$  (defined as the contribution to the Hall effect due to the spontaneous magnetization  $\sigma_s$ ) of semiconducting manganese ferrite  $Mn_xFe_yO_4$  having either an excess ( $x = 0.84--0.87$ ,  $y = 2.13--2.16$ ) or a deficiency ( $x = 1.03--1.28$ ,  $y = 1.72--1.97$ ) of Fe ions. The value of  $R_s$  was determined as a function of composition, temperature ( $0--400^\circ C$ ), electrical resistivity  $\rho$ , and of  $\sigma_s$ . When the Fe content was increased,  $\rho$  rose but  $R_s$  decreased. For Fe-deficient samples

Card 1/2

L 11994-65

ACCESSION NR: AP4048417

$\ln|R_s|$  rose linearly with  $1/T$ , where  $T$  is absolute temperature; for Fe-rich samples the rise of  $\ln|R_s|$  with  $1/T$  was sublinear.  $R_s/\rho$  decreased linearly with increase of  $\sigma_s^2$  (for metal ferromagnets  $R_s$  and not  $R_s/\rho$  is a linear function of  $\sigma_s^2$ ). The results are shown to be in general agreement with the theory of the spontaneous Hall effect in ferrites (Sh. Sh. Abel'skiy and Yu. P. Irkhin, ZhETF, v. 44, 230, 1963; L. E. Gurevich and I. N. Yassievich, FTT, v. 5, 2620, 1963). "The author thanks K. P. Belov for his interest and discussion of the results." Orig. art. has: 4 figures and 2 formulas. 2

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 24Feb64

ENCL: 00

SUB CODE: SS

NR REF' SOV: 023

OTHER: 002

Card 2/2



L 22207-65 EWT(1)/EEC(t)/EED-2 Feb EJP(c)/AFWL/SSD/ASD(m)-3/AS(mp)-2/  
ESD(dp)/ESD(gs)/ESD(t)  
ACCESSION NR: AP5000661 S/O:81/64/008/012/3626/3630

AUTHOR Svirina, Ye. P.; Malikova, M. A.

TITLE: Hall and Nernst — Ettingshausen effects in cobalt ferrite

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3626-3630

TOPIC TAGS: Hall effect, galvanomagnetic effect, Nernst Ettingshausen effect, cobalt alloy, ferrite

ABSTRACT: Experimental data were obtained by a combined study of the temperature dependence of the Hall and Nernst — Ettingshausen (NE) effects, the electrical resistivity, and the spontaneous magnetization of a single crystal of cobalt ferrite ( $\text{Co}_{0.94}\text{Fe}_{2.06}\text{O}_4$ ). The crystal was grown by T. M. Perekalina at the Crystallography Institute AN SSSR using the Verneuil method. The study was carried out between 63 and 420C using an electric furnace. A temperature gradient of 10—15 deg across the sample (required in NE measurements only) was established with an auxiliary heater and a cooler. The Hall emf ( $E_H$ ) was positive and the NE emf ( $E_N$ ) was negative. The Hall emf at 80 and 163C

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L 22207-65

ACCESSION NR: AP5000661

was found to decrease considerably as the magnetic field increased. When the temperature increased, the slope of the  $E_H(H)$  curves changed and, in the same magnetic field, the slope became positive. The NE effect emf always rose with the magnetic field. The data on  $E_H$  and  $E_N$  were analyzed using the following expressions:

$$E_H = R_O H + R_S I_S + R_I I$$

$$E_N = Q_O H + Q_S I_S + Q_I I$$

where R's and Q's are Hall and NE coefficients, respectively; H is the magnetic field and I the magnetization; the classical (nonmagnetic), spontaneous -magnetization and total-saturation-magnetization components are denoted by the subscripts "O," "S," and "I" respectively.  $R_S$  was positive and decreased nonotonically with temperature, while  $Q_S$  was negative and had a minimum at 200—250C. The temperature dependence of  $R_O$  and of the electrical resistivity  $\rho$  showed that the Hall mobility fell with increasing temperature, indicating phonon scattering of the conduction electrons (the sample was n-type) as the dominant mechanism. A method for calculating the coefficient  $Q_O$  was described; Orig. art. has: 6 figures and 3 formulas. [02]

Card 2/3

L 22207-65

ACCESSION NR: AP5000661

ASSOCIATION: Moskovskiy gosudarstvennyy universitet Im. M. V. Lomonosova  
(Moscow State University)

SUBMITTED: 02Apr64

ENCL: CO

SUB CODE: SS, EM

NO REF SOV: 011

OTHER: 003

ATD PRESS: 3169

SVIRINA, Ye. P.; MALIKOVA, M. A.

"The Hall and Nernst-Ettinghausen effects in the ferrites."

report submitted for Intl Conf on Magnetism, Nottingham, UK, 6-13 Sep 64.

Moscow State Univ.

L 62225-65 EPF(n)-2/ENT(1)/ENT(m)/EMP(t)/ENP(t) TJP(c) JD/JG

ACCESSION NR: AP5020246

UR/0188/65/000/004/0094/0096  
538.632 : 621.518.134

AUTHORS: Svirina, Ye. P.; Malikova, M. A.

31  
29  
B

TITLE: Hall and Nernst-Ettingshausen effects in lithium ferrite

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 4, 1965, 94-96

TOPIC TAGS: solid state physics, Hall effect, lithium, Nernst effect, Ettingshausen effect

ABSTRACT: Experimental curves were obtained of Hall emf  $E_H$ , magnetization  $I$ , and electric resistivity of polycrystalline lithium ferrite for various temperatures in the range 290 to 780K. At a temperature of 489K the Nernst-Ettingshausen (N-E) emf was obtained as a function of the magnetic field. The specimen was a parallelepiped  $25 \times 10 \times 5 \text{ mm}^3$ . In the temperature range 590-785K there is a decrease in  $E_H$  as the magnetic field is increased. Two reasons are given for this behavior: 1) a decrease in the spontaneous Hall coefficient in the region of true magnetization (para-process), and 2) the difference in sign between the classical and the spontaneous

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L 62225-65

ACCESSION NR: AP5020246

2

Hall constants. The N-E emf curve has a negative sign for lithium ferrite. The N-E emf susceptibility versus the para-process susceptibility curve is shown at 489K in Fig. 1 of the Enclosure. The Hall mobility of electron conductivity in lithium ferrite was obtained as the ratio  $R_H/\rho$  as a function of the temperature (see Fig. 2 of the Enclosure). According to semiconductor theory, the increase in mobility with temperature indicates the impurity characteristic of current carrier scattering in the temperature range of the tests. "The authors thank Professor K. P. Belov for his interest in the work and for taking part in reducing the data." Orig. art. has: 6 figures. [04]

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Kafedra obshchey fiziki  
(Moscow State University, Department of General Physics)

SUBMITTED: 11Feb65

ENCL: 01

SUB CODE: SS, EM

NO REF SOV: 005

OTHER: 000

ATD PRESS: 4076

Card 2/3

L 62225-65

ACCESSION NR: AP5020246

ENCLOSURE: 01

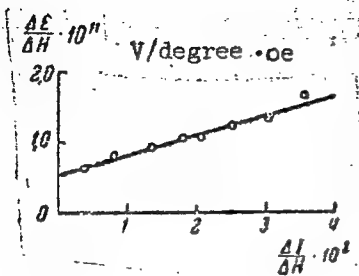


Fig. 1. Variation of susceptibility of the Nernst-Ettingshausen emf as a function of the susceptibility of the process at 489K.

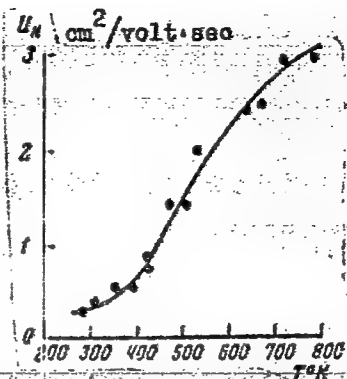


Fig. 2. Variation of the Hall mobility with the temperature.

Card 3/3

L 29970-66 EWT(1) IJP(c) SOURCE CODE: UR/0181/66/008/004/1217/1220  
ACC NR: AP6012488

AUTHORS: Belov, K. P.; Svirina, Ye. P.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Temperature dependence of the spontaneous Hall constant in ferromagnets

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1217-1220

TOPIC TAGS: ferromagnetic material, Hall constant, temperature dependence, Curie point, paramagnetic susceptibility

ABSTRACT: The authors claim that the experimental results on the temperature dependence of the ferromagnetic Hall constant, which called for this constant to have a maximum at the Curie point, are incorrect, owing to improper methods of calculating the ferromagnetic constant, and that an analysis of their own experimental results shows that there should be no such maximum. To prove their statement, the authors analyze their earlier experimental data (ZhETF v. 37, 1212, 1959) on the Hall effect in Fe<sub>3</sub>Pt. It is shown in particular that at the Curie point the Hall coefficient goes over monotonically into the paramagnetic Hall constant,

Card 1/2



L 46923-66 EWT(1)/EWT(m)/EWP(t)/ETI — IJP(c) — JD/HW/AT

ACC NR: AP6015488

(N)

SOURCE CODE: UR/0181/66/008/005/1599/1601

59  
58  
8

AUTHOR: Svirina, Ye. P.; Malikova, O. A.; Malikova, M. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: The Hall and Nernst-Ettingshausen effects in ferrites containing excess iron ions

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1599-1601

TOPIC TAGS: ferrite, Hall effect, Hall constant, cobalt compound, manganese compound, Nernst effect, Ettingshausen effect, semiconductor research

ABSTRACT: The Hall ( $H$ ) and Nernst-Ettingshausen ( $N-E$ ) effects have not been sufficiently researched with respect to magnetic semiconductors, e. g., ferrites. Using conventional potentiometric instrumentation, the authors examined the temperature relationships of the  $H$  and  $N-E$  effects, the electrical resistivity ( $\rho$ ), and the magnetization intensity ( $\sigma_s$ ) of the following ferrites:  $(\text{Mn}_{0.74}\text{Fe}_{2.26}\text{O}_4)$ ,  $(\text{Ni}_{0.69}\text{Fe}_{2.31}\text{O}_4)$  and  $(\text{Co}_{0.94}\text{Fe}_{2.60}\text{O}_4)$ . These ferrites have an electrical resistivity of only 10 to 100 ohm $\cdot$ cm at low temperatures (80°K and above). Measurements of Hall emf in Mn and Ni ferrites in a broad temperature range showed that the proportional relationship between  $R_s/\rho$  and  $\sigma_s^2$  (where  $R_s$  is the spontaneous Hall coefficient,  $\rho$  is the electrical

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ACC NR: AP6015488

resistivity, and  $\sigma_g$  is the spontaneous magnetization intensity per unit mass) were not satisfied. However, there is a linear relationship between  $R_g/R_0$  and  $\sigma_g^2$  (where  $R_0$  is the classical Hall coefficient) for the entire investigated temperature range. In view of the complex nature of the Hall mobility, it can be assumed that in the presence of several types of scattering of the current carriers,  $R_g$  depends only on the scattering of the magnetic discontinuities. Similarly, the relationship between  $Q_g/Q_0$  and  $\sigma_g^2$  for ferrites of Mn and of Co was established (where  $Q_g$  and  $Q_0$  are the spontaneous and the classic  $N-E$  coefficients, respectively), and, was found to be linear. Thus, we have the empiric relationship

$$\frac{Q_g}{Q_0} = A \frac{R_g}{R_0},$$

where  $A$  is a proportionality factor. Upon expressing  $R_0$  through the current carrier concentration  $n$ , and making some transformations, we obtain

$$Q_g = f(r) R_g \sigma,$$

where  $f(r)$  is a function that depends on the scattering parameters at varying temperature, and  $\sigma$  is the electrical conductivity. The authors thank K. P. Belov for his interest in the work and for taking part in the discussion of the experimental results. Orig. art. has: 3 figures, 3 formulas.

SUB CODE: 20/

SUBM DATE: 14Jul65/

ORIG REF: 012

Card 2/2 awm

GINTOVT, V.Ye.; SOLOVINA, M.L.; SHANDOR, Kh.; LEBEDEV, B.I.;  
SVIRINA, Z.A.

Making use of heterosis in raising chicks for meat. Trudy Inst.  
gen. no.29:290-294 '62. (MIRA 16:7)

(Poultry breeding) (Heterosis)

KOPYLOVSKAYA, G.Ya.; SOLONINA, M.L.; LEBEDEV, B.I.; SVIRINA, Z.A.

Effectiveness of the utilization of the Cornish chicken breed  
for the production of broilers. Trudy Inst. gen. no.31:289-301  
'64. (MIRA 17:9)

SVIRINA, Z.L.

Diagnostic role of Paul-Bunnell reaction [with summary in English,  
p.61-62]. Probl.gemat. i perel. krovi 3 no.1:24-27 Ja-F '58.

(MIRA 11:3)

1. Iz klinicheskoy laboratorii (naychnyy rukovoditel' - prof. G.A.  
Aleksyev) Tsentral'noy klinicheskoy bol'nitsy imeni Semashko  
Ministerstva putey soobshcheniya  
(INFECTIOUS MONONUCLEOSIS, diagnosis,  
Paul-Bunnell reaction (Eng))

FORINA, N.T.; DUBROVSKAYA, V.S.; SVIRINA, Z.I.

Methodology of leucocyte concentration. Lab. delo no. 11:  
655-657 '64. (MIRA 17:12)

1. III kafedra terapii (zaveduyushchiy - chlen-korrespondent  
AMN SSSR prof. I.A.Kassirskiy) TSentral'nogo instituta  
usovershenstvovaniya vrachey i laboratoriya TSentral'noy  
klinicheskoy bol'nitsy im. Semashko Ministerstva putey  
soobshcheniya (glavnyy vrach A.A.Potsubeyenko), Moskva.

SVIRINOVSKIY, Ya.Kh.

Deliriumlike fantasy syndrome. Trudy Gos.nauch.-issl.inst.psikh.  
27:300-306 '61. (MIRA 15:10)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy  
psikhiatrii imeni V.P.Serbskogo. Dir. - dotsent G.V.Morozov.  
Tret'ye otdeleniye. Nauchnyy rukovoditel' - prof. N.I.Felinskaya.  
(FANTASY) (DELIRIUM) (FORENSIC PSYCHIATRY)

SVIRINOVSKIY, Ya.Kh.

Syndrome of deliriumlike phantasies in a prolonged course of  
reactive states. Probl. obshchei i sud. psikh. no.1':189-  
196 '63. (MIRA 18:9)



SVIRINOVSKIY, Ya.Ye.; SHOSTAKOVICH, B.V.

Compulsory treatment as one of the methods of preventing the actions  
of socially dangerous insane persons. Sud.-med. ekspert. 2 no.3:47-  
49 JI-S '59. (MIRA 13:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy psikiatrii  
imeni prof. Serbskogo (dir. - dotsent G.V. Morozov).  
(MENTALLY ILL--CARE AND TREATMENT)

SVIRINOVSKIY, Ya. Ye.

Analysis of the divergence in diagnoses between schizophrenias  
and simulations. Prak. sudebnopsikh. ekspert. no.1:3-10 '60.  
(MIRA 15:7)

(SCHIZOPHREMIA) (MALINGERING)

SVIRINOVSKIY, Ya.Ye.

Correlation of the hysteric and simulative mechanisms. Prak.sudebnopsikh.  
(MIRA 17:10)  
(Kript. no.3:68-74 '61.

SVIRINOVSKIY, Ya.Ye.

Atypical fantasies similar to delirium. Prak.sudebnopsikh.  
ekspert. no.5:62-69 '61. (MIRA 16:4)  
(PSYCHOSES)

SVIRINOVSKIY, Ya.Ye.

Study of cutaneous galvanic reflexes in patients with psychogenic deliriumlike phantasies. Prob.sud.psikh. 10:147-154'61  
(MIRA 16:7)

(REFLEXES) (DELIRIUM)

KISELEV, A.S.; MELIK-MKRTYCHYAN, V.A.; SVIRINOVSKIY, Ya.Ye.; SHOSTAKOVICH,  
B.V.

Analysis of the repeated actions of mental patients which are  
dangerous to society. Trudy Gos.nauch.-issl.inst.psikh. 27:383-  
388 '61. (MIRA 15:10)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy  
psikhiatrii imeni V.P.Serbskogo. Dir. - dotsent G.V.Morozov.  
Nauchnyy rukovoditel' - dotsent G.V.Morozov.  
(MENTALLY ILL) (FORENSIC PSYCHIATRY)

STRELKOV, I.G., doktor sel'khoz. nauk, glav. red.; KOVALENKO, I.F.,  
kand. sel'khoz. nauk, red.; SVIRITSKIY, Ya.N., kand. sel'-  
khoz. nauk, red.; MIKHALEV, Ya.K., kand. sel'khoz. nauk,  
red.; MOSKALEV, A.I., kand. sel'khoz. nauk; LARIN, V.D.,  
red.; ZEN'KO, M.M., tekhn. red.

[Pulse crops] Zernobobovye kul'tury. Minsk, Gos.izd-vo  
sel'skokhoz. lit-ry BSSR, 1963. 246 p. (MIRA 17:1)

1. White Russia. Ministerstvo sel'skogo khozyaystva.  
(White Russia—Legumes)

SVIRIZHEV, M.V., zaslužil lekar na RSFSR, k.m.n.

Prophylactic and restorative operations in joint tuberculosis.  
Khirurgiiia 15 no.2/3:150-157 '62.

1. Iz Novosibirski nauchno-izsledovatel'ski institut po  
tuberkuloza.

(TUBERCULOSIS OSTEOARTICULAR surg)



ALEKSEYEVA, G.K.; YEGOROVA, G.D.; MINAYEVA, Ye.V.; SVIRKINA-  
DEMINA, G.G.; NOVIK-ZOLOTOVA, L.N.; SPYSHNOV, P.A.,  
titul'nyy red.; NOVITSKIY, L.M., nauchn. red.;  
VDOVENKO, Z.I., red.; GOL'BERG, T.M., tekhn.red.

[Album of new recommended construction equipment] Al'bom  
novoi stroitel'noi tekhniki rekomenduemoi k vnedreniiu.  
Moskva, Gosstroizdat. No.7. [Sanitary equipment] Sani-  
tarno-tekhnicheskoe stroitel'stvo. 1963. 84 p.

(MIRA 16:11)

(Municipal engineering--Equipment and supplies)  
(Sanitary engineering--Equipment and supplies)

SVIRKOV, A.I., provizor

Dependence of the temperature of a solution undergoing sterilization on the temperature of the sterilizer. Apt.delo 8 no.4:13-20  
Jl.-Ag '59. (MIRA 12:10)

1. Krasnodarskoye nauchno-farmatsevticheskoye obshchestvo.  
(STERILIZATION)

SVIRKOV, A.I.

Automation of the process of sterilization of drugs in the  
drugstore. Apt. delo 12 no.2:60-63 Mr.-Ap '63. (MIRA 17:7)

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AUTHORS: Verbitskiy, M. V.; Svirkov, V. S.; Semenova, Ye. A.; Logunov, S. S.

ORG: none

TITLE: A method for reducing the zero drift of a magnetic amplifier.<sup>25</sup> Class 21,  
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32

TOPIC TAGS: magnetic amplifier, amplifier design

ABSTRACT: This Author Certificate presents a method for reducing the zero drift of a magnetic amplifier with a differential load (see Fig. 1). The design simplifies the amplifier and increases its reliability. A signal is fed to the input of the magnetic amplifier. This signal is equal to the difference between the voltage proportional to the sum of the currents of the load at the present moment and to that same voltage at the moment of switching on the amplifier.

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